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Mitchell et al.

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(54) **SPINAL STABILIZATION SYSTEM AND METHOD**

(56) **References Cited**

U.S. PATENT DOCUMENTS

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3,242,922 A 3/1966 Thomas
3,648,691 A * 3/1972 Lumb A61B 17/7068
606/279

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(Continued)

FOREIGN PATENT DOCUMENTS

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AU 2002322554 7/2002
EP 1427341 6/2004

(Continued)

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This patent is subject to a terminal disclaimer.

OTHER PUBLICATIONS

"U.S. Appl. No. 10/200,024, Examiner Interview Summary mailed Jan. 10, 2008", 2 pgs.

(Continued)

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(57) **ABSTRACT**

A spinal stabilization system may include a pair of structural members coupled to at least a portion of a human vertebra with connectors. Connectors may couple structural members to spinous processes. Some embodiments of a spinal stabilization system may include fasteners that couple structural members to vertebrae. In some embodiments, a spinal stabilization system, provides three points of fixation for a single vertebral level. A fastener may fixate a facet joint between adjacent vertebrae and couple a stabilization structural member to a vertebra. Connectors may couple the structural members to the spinous processes of the vertebrae. Use of a spinal stabilization system may improve the stability of a weakened or damaged portion of a spine. When used in conjunction with an implant or other device, the spinal stabilization system may immobilize vertebrae and allow for fusion of the implant or other device with vertebrae.

17 Claims, 17 Drawing Sheets

